

Claims:

1. A in-office wireless code division multiple access , CDMA, communication system, comprising:

a local area network, LAN, having an ethernet communication back-bone;

a plurality of CDMA wireless base stations coupled to said ethernet communication back-bone;

a wireless internet server coupled to said ethernet communication back-bone;

a plurality of wireless communication devices coupled to said CDMA wireless base stations via said ethernet communication back-bone;

a communication gateway coupled to said ethernet communication back-bone; and

a router coupled to said ethernet communication back-bone to enable said communication devices communicate to the internet.

2. The system as recited in Claim 1 wherein said wireless base station includes a plurality of CDMA wireless modem modules for providing a communication link to external wireless communication devices to the in-office wireless communication system.

3. The system of claim 2, wherein said wireless base station further includes a applications processing module for processing calls received and originated from said wireless base station.

4. The system of claim 3, wherein said call processing module formats call signals received by said wireless base station into data packets adaptable for the ethernet communication back-bone.

5. The system of claim 3, wherein said wireless base station further includes an inter-networking processing module for providing a communication channel between the internet and a wireless communication unit coupled to said ethernet communication back-bone.

6. The system of Claim 1, wherein said wireless internet server includes a wireless mobility module for managing mobile units within the system.

7. The system of Claim 1, wherein said wireless internet server provides real-time call processing.

8. The system of Claim 5, said wireless internet server includes an integrated base station controller module and a mobile switch controller module for managing calls between communications units within the system.

9. The system of claim 1, wherein the wireless internet server includes call manger processing module for managing calls received and calls originated from the in-office wireless communication system.

10. A wireless office communication solution system, comprising:

an ethernet communication pathway;

a wireless base station coupled to said ethernet communication pathway to receive and originate wireless communication traffic over said communication pathway; and

a wireless internet server coupled to said communication pathway to receive and manage wireless communication traffic over said communication pathway.

11. The system of Claim 10, further including a communication gateway coupled to said communication pathway for providing communication formatting logic for transmitting wireless call generated in the wireless base station to a public switch telephone network system.

12. The system of claim 10, wherein the wireless base station includes call selection modules for determining whether a call received or originated from the wireless base station is a voice call or a data call.

13. The system of claim 10, wherein the wireless base station includes call processing module for formatting wireless calls received by the wireless base station into formats adaptable for transmission on the ethernet communication pathway.

14. The system of Claim 10, wherein the wireless base station further includes a communication interface for providing communication protocols to enable the wireless base station communicate over the ethernet communication pathway.

15. The system of claim 10, wherein the wireless base station further includes a plurality of inter-networking functional modules for providing communication channel between the wireless base station and the internet.

16. The system of claim 10, wherein the wireless internet server includes call manager modules for handling calls processed by the wireless base station for transmission over the ethernet communication pathway.

17. The system of claim 16, wherein the wireless internet server further includes a communication interface module for providing communication protocol to allow the wireless internet server communicate over the ethernet communication pathway.

18. A code division multiple access, CDMA, communication system having a plurality of integrated wireless base stations, WIBS, having integrated base station controller and mobile switch controller function, the WIBS comprising:

a plurality of CDMA modems coupled to modulate and demodulate radio signals provided to said WIBS by a mobile communication unit;

call processing module coupled to receive and process calls by said WIBS;

a plurality of interworking function modules coupled to said call processing module to process voice and data calls received by said WIBS; and

a network interface unit coupled to said plurality of interworking function modules to format calls processed in said WIBS for delivery over an ethernet back-bone.

19. The WIBS of claim 18, wherein the call processing module includes call processing logic for processing calls received by the WIBS.

20. The WIBS of claim 19, wherein the call processing module further includes call selection and distribution logic for selecting and distributing calls to and from a mobile unit to the WIBS during a forward link and a reverse link.

21. The WIBS of claim 18, wherein the plurality of IWFs includes a call IWF for handling voice calls received by the WIBS.

22. The WIBS of claim 18, wherein the plurality of IWFs includes a data IWF for handling data call received by the WIBS.

23. The WIBS of claim 18, wherein the network interface module packetizes calls processed by the WIBS into data packets adaptable for transmission within an internet protocol transmission medium.

24. The WIBS of claim 20, wherein the call selection and distribution logic enables the WIBS to communicate with other WIBS coupled to the communication system.

25. The WBS of claim 18, wherein the plurality of modems receive CDMA data.

26. A wireless office communication solution system, comprising:  
an ethernet communication pathway;  
a wireless base station coupled to said ethernet communication pathway to receive and originate wireless communication traffic over said communication pathway;  
a wireless internet server coupled to said communication pathway to receive and manage wireless communication traffic over said communication pathway; and  
a plurality of repeaters coupled to said ethernet communication pathway.

27. The system of Claim 26, further including a communication gateway coupled to said communication pathway for providing communication formatting logic for transmitting wireless call generated in the wireless base station to a public switch telephone network system.

28. The system of claim 26, wherein the wireless base station includes call selection modules for determining whether a call received or originated from the wireless base station is a voice call or a data call.

29. The system of claim 26, wherein the wireless base station includes call processing module for formatting wireless calls received by the wireless base

formats adaptable for  
the system of Claim 2  
horizontal and vertical wire

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